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(71)Applicant : NIPPON OIL CO LTD

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(72)Inventor : AOKI NOBUO

## (54) PHOTOSENSITIVE MATERIAL

## (57)Abstract:

**PURPOSE:** To provide a resist which satisfies the requirement for high resolution and high sensitivity by adding photosensitive group to Fullerene.

**CONSTITUTION:** Photosensitive groups are added to Fullerene which is a carbon allotrope called as a carbon cluster. Fullerene expressed by molecular formula C<sub>60</sub> or C<sub>70</sub> is preferably used. Any functional groups which can cause chemical reaction by irradiation of UV rays, for UV rays, X-rays, electron beams or the like can be used as the photosensitive groups. To introduce photosensitive groups to Fullerene, normal chemical reaction is used. For example, Fullerene is stirred in alkyl amine at room temp. for several hours to add alkyl amino to the Fullerene and then the reaction with methacryl chloride is effected at room temp. for several hours. Thus, a photosensitive material having methacrylamide group as photosensitive groups can be synthesized. This photosensitive material has high dry etching resistance and can be used in a thin film state, so that the film has high resolution and high sensitivity.

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